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cont.

substrate 409. The substrate 409 could be tetraethylorthosilicate (TEOS) or some such other compound. The separation barriers 408 of the respective power vias 406 are formed between conductive portions of the thin film resistor 112 and an associated power source 430, which derives power from the power bus 128 of FIG.

1. The separation barrier 408 is preferably made of a non-corrosive material, such as Tantalum Aluminum, Tungsten Silicon Nitride, or Tantalum Nitride. As a result, the electrical properties of the circuit are minimally affected while decreasing the possibility of an electrical open.

IN THE CLAIMS

Please replace pending claims 1, 10 and 17 with amended claims 1, 10 and 17 as follows:

1. (Once Amended) A printhead having a circuit with plural resistors and a power source, comprising:

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a metal stack formed within the circuit and comprised of a first metal layer coupled to the power source and a second metal layer having a portion that forms the resistors; and

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at least one power via formed within the circuit as an interface between the first metal layer and the second metal layer, the power via including a separation barrier located adjacent the first metal layer and between the resistors and the power source.

10. (Once Amended) In an ink jet printhead, a method for increasing resistance to ink corrosion of a thin film circuit having a portion defined by at least one thin film resistor, the method comprising:

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connecting a power source to the thin film resistor with a power via; and substantially preventing spreading of the ink corrosion from the thin film resistor to a power source with a separation barrier portion of the power via.

17. (Once Amended) A method of manufacturing a circuit for an ink jet printhead, the circuit having plural resistors, a power bus and a controller bus, the method comprising:

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creating conductive trace routes from the power bus to power vias associated with each resistor and to each resistor and from the controller bus to controller vias associated with each resistor and to each resistor; and creating a separation barrier within the power via to substantially prevent spreading of the ink corrosion from the resistors to the power bus and the controller bus.
